

What is claimed is:

1 1. A machine readable medium containing configuration instructions for
2 performing a method for retrieving data accessible by posing a plurality of queries over a
3 network to at least one target server, the method comprising the steps of:

4 selecting a plurality of proxy server services;

5 transmitting a first one of the plurality of queries to a first one of the

6 plurality of proxy server services for transmission to one of the at least one target servers;

7 transmitting a second one of the plurality of queries to a second one of the

8 plurality of proxy server services for transmission to one of the at least one target servers;

9 and

10 for each one of the plurality of queries, receiving from its corresponding

11 proxy server service a reply from its corresponding target server.

1 2. The machine readable medium of claim 1, wherein said selecting step
2 comprises:

3 searching the network for proxy server services;

4 for each service found in the searching step, testing the service using test

5 criteria; and

6 selecting those services meeting the test criteria.

1 3. The machine readable medium of claim 2, wherein the test criteria
2 include retrieval time.

1 4. The machine readable medium of claim 2, wherein the test criteria
2 include number of errors in a response to a test query.

1 5. The machine readable medium of claim 2, wherein the selecting step
2 includes selecting a primary list of proxy services meeting a first set of criteria and a
3 secondary list of proxy services meeting a second set of criteria.

1 6. The machine readable medium of claim 1, wherein the method further
2 comprises the step of ranking the selected proxy server services according to test criteria,
3 and wherein the transmitting step includes transmitting the query to a best-ranked
4 available one of said services.

1 7. The machine readable medium of claim 1, wherein the method further
2 comprises the step of adding dummy queries to the plurality of queries to be assigned and
3 transmitted.

1 8. The machine readable medium of claim 1, wherein the method further
2 comprises the step of pausing for a substantially unpredictable time interval before
3 performing the transmitting step.

1 9. The machine readable medium of claim 1, wherein said transmitting
2 step comprises transmitting the queries to random ones of the selected proxy server
3 services.

1 10. The machine readable medium of claim 1, further comprising the step
2 of constructing at least one of said queries based on replies received in response to
3 previous queries.

1 11. The machine readable medium of claim 1, wherein the plurality of
2 queries are posed through a restricted interface that returns the k data points closest to a
3 query point, and the method further includes the steps of:

4 calculating a maximum radius from a previous query point to a data point
5 returned by the corresponding query;

6 determining a region within R covered by the previous query based on the
7 corresponding maximum radius;

8 computing quadtrees of progressively greater levels until a computed
9 quadtree has an uncovered node entirely outside the covered region; and

10 constructing a subsequent query to contain a query point that is a center of
11 the uncovered quadtree node.

1 12. The machine readable medium of claim 1, further comprising the step
2 of constructing a database view of the data received from the proxy server services.

1 13. A method for retrieving data accessible by posing a plurality of queries
2 over a network to at least one target server, the method comprising the steps of:

3 selecting a plurality of proxy server services;

4 transmitting a first one of the plurality of queries to a first one of the
5 plurality of proxy server services for transmission to one of the at least one target servers;

6 transmitting a second one of the plurality of queries to a second one of the
7 plurality of proxy server services for transmission to one of the at least one target servers;
8 and

9 for each one of the plurality of queries, receiving from its corresponding
10 proxy server service a reply from its corresponding target server.

1 14. The method of claim 13, wherein said selecting step comprises:
2 searching the network for proxy server services;
3 for each service found in the searching step, testing the service using test
4 criteria; and
5 selecting those services meeting the test criteria.

1 15. The method of claim 14, wherein the test criteria include retrieval
2 time.

1 16. The method of claim 14, wherein the test criteria include number of
2 errors in a response to a test query.

1 17. The method of claim 14, wherein the selecting step includes selecting
2 a primary list of proxy services meeting a first set of criteria and a secondary list of proxy
3 services meeting a second set of criteria.

1 18. The method of claim 13, further comprising the step of ranking the
2 selected proxy server services according to test criteria, and wherein the transmitting step
3 includes transmitting the query to a best-ranked available one of said services.

1 19. The method of claim 13, further comprising the step of adding dummy
2 queries to the plurality of queries to be assigned and transmitted.

1 20. The method of claim 13, further comprising the step of pausing for a
2 substantially unpredictable time interval before performing the transmitting step.

1 21. The method of claim 13, wherein said transmitting step comprises
2 transmitting the queries to random ones of the selected proxy server services.

1 22. A method of configuring a client machine connected to a network, the
2 method comprising transmitting configuration instructions through the network to the
3 client machine for performing a method of retrieving information accessible by posing a
4 plurality of queries over the network to at least one target server, the retrieval method
5 comprising the steps of:

6 selecting a plurality of proxy server services;
7 transmitting a first one of the plurality of queries to a first one of the
8 plurality of proxy server services for transmission to one of the at least one target servers;

9 transmitting a second one of the plurality of queries to a second one of the
10 plurality of proxy server services for transmission to one of the at least one target servers;
11 and

12 for each one of the plurality of queries, receiving from its corresponding
13 proxy server service a reply from its corresponding target server.

1 23. The method of claim 22, wherein said selecting step comprises:
2 searching the network for proxy server services;
3 for each service found in the searching step, testing the service using test
4 criteria; and
5 selecting those services meeting the test criteria.

1 24. The method of claim 23, wherein the test criteria include retrieval
2 time.

1 25. The method of claim 23, wherein the test criteria include number of
2 errors in a response to a test query.

1 26. The method of claim 23, wherein the selecting step includes selecting
2 a primary list of proxy services meeting a first set of criteria and a secondary list of proxy
3 services meeting a second set of criteria.

1 27. The method of claim 22, wherein the retrieval method further
2 comprises the step of ranking the selected proxy server services according to test criteria,
3 and wherein the transmitting step includes transmitting the query to a best-ranked
4 available one of said services.

1 28. The method of claim 22, wherein the retrieval method further
2 comprises the step of adding dummy queries to the plurality of queries to be assigned and
3 transmitted.

1 29. The method of claim 22, wherein the retrieval method further
2 comprises the step of pausing for a substantially unpredictable time interval before
3 performing the transmitting step.

1 30. The method of claim 22, wherein said transmitting step comprises
2 transmitting the queries to random ones of the selected assigned proxy server services.

- 1 31. The machine readable medium of claim 22, further comprising the step
- 2 of constructing a database view of the data received from the proxy server services.